STUDIO LIGHTING STYLES IN ELECTRONIC VIDEO PRODUCTION

A Thesis
Presented to
the Faculty of the Caudill College of Humanities
Morehead State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Erol Nezih Orhon
July 8, 1997
Accepted by the faculty of the Caudill College of Humanities, Morehead State University, in partial fulfillment of the requirements for the Master of Arts degree.

Director of Thesis

Master's Committee: Michael Bed, Chair

Date: July 21, 1977
STUDIO LIGHTING STYLES IN ELECTRONIC VIDEO PRODUCTION

Erol Nezih Orhon, M. A.
Morehead State University, 1997

Director of Thesis: Dr. Michael Biel

This study intends to explore and explain four different studio lighting styles (Silhouette, Cameo, Rembrandt, and Notan) in electronic video productions. Written sources, professional ideas, interviews, and visual sources are used in this study to show how we can establish these four lighting styles. Review of the literature and interviews help us to understand the basics of the light and the lighting. The accompanying videotape, according to the information from review of the literature, shows us which steps have to be taken for each different lighting style. Light-color relationship, the lighting, and the lighting equipment are demonstrated as a part of studio lighting. This study shows that there is a relationship between different art forms and the lighting styles. The use of the lighting equipment, and the experience on lighting are the important factors to determine the quality of lighting style in studio lighting.

Accepted by: Michael Biel, Chair

[Signatures]
Table of Contents

Introduction

  Purpose of the study 2
  Source of idea for the study 2
  Conclusions and observations from the study 4

Review of the literature 8

References for the videotape 26

References 28

Appendix A 31
Appendix B 38
Appendix C 48
Appendix D 55
Introduction

a. Purpose of the study

This study intends to explore and explain four different studio lighting styles (Silhouette, Cameo, Rembrandt, and Notan) in electronic video productions. Its target audience is second year and above television production students. There are many written and video sources about the lighting styles in the market, but almost none of them show and explain how we can create the lighting styles in electronic video productions. That’s why this thesis’ main purpose is to show a target audience how they can create different lighting styles in the studio.

This study also intends to underline the relationship between traditional and classical art works and lighting styles while showing the importance of the studio lighting and the lighting styles in video productions. The review of the literature part of this thesis intends to show the relationship between Notan lighting and Japanese Sumi-e art, and Rembrandt lighting and the light used in Rembrandt’s paintings.

Besides the information gathered in this thesis, students will be able to follow four different studio lighting styles according to the written script attached to this thesis (see Appendix D). This would give them a chance to follow a path for understanding the steps in a creative work.

b. Source of idea for the study

During my senior year at Anadolu University in Turkey, student groups in charge of their video productions were being evaluated by a six member committee. My
professor who teaches Visual Aesthetics and a member of the evaluation committee, Dr. Levend Kilic, had told me that the studio lighting styles are not only simple applications, they are complicated art works themselves. My advisor always advised production groups to be careful on lighting not only because of the quality of the picture, but also for the stylistic meaning and the expression. After the remarks by my professor, I always wondered if I could write a paper or do significant research about the lighting styles for studio work in electronic video production.

Another incident which has caused me to investigate studio lighting styles was my television productions internship at Morehead State University. I was a member of the production team which was responsible for a 30 second-long commercial for the Art Department. It was a tremendous experience for me to see how lighting was important indoors and especially in the studio. I should say that I realized that lighting was one of the main creative and stylistic parts of the production even if there was enough light outside or in the studio.

Fall 1996 semester at Morehead State University provided an opportunity for me to combine my ideas and work on four different lighting styles in depth. Dr. Michael Biel gave me a chance to investigate stylistic lighting. I had the opportunity to see the ideas of well-known authors about style lighting according to the results of my work in Dr. Biel's course. This Directed Study under Dr. Biel encouraged me to prepare myself for more detailed, and more professional research. After completing the review of the literature in my Directed Study, I saw that no source was showing exactly how we could create the lighting styles in studio for electronic video production. The literature were only explaining what those lighting styles were about. This situation helped me to
understand the necessity of a videotape that would show 'know-how' in the creation of four major studio lighting styles (Silhouette, Cameo, Notan, and Rembrandt) in electronic video productions.

Other events, which occurred during Fall 1996 semester strengthened the idea of creative thesis. One such event was the opportunity to be an intern at Cable News Network (CNN) Washington, DC. At the same time, Kentucky Educational Television (KET) Lexington studios offered another opportunity for me to investigate the topic of lighting in electronic video production in depth.

I have to thank Dr. Michael Biel, Dr. Janet Kenney, and Dr. Jack Wilson for their support and help. They always encouraged me to follow correct procedures during my thesis. I knew that the decision-making and the refining of ideas are the most difficult times for a thesis project, but my committee members were very helpful and encouraging from the very first meeting until the end of the study.

c. Conclusions and observations from the study

One of the most important things for me in this study was to be able to manage the time and the resources. Working on a videotape by myself was absolutely stressful. There were times when I felt that managing the gathered information, transferring the information to an audio-visual material, and create a new meaningful piece on this material were most enjoyable. I should say that every step I took in this study was part of time and human management. As a researcher and a producer, I had to control myself, my time, and my sources. Because of this, I decided to establish a calendar according to my thesis committee members’ suggestions. This calendar can be shown as follows:
a. Study for the review of the literature: This period started with the directed study under Dr. Michael Biel in August 1996 and it went through the end of the study (July 1997). Printed materials, video sources, art galleries-museums, and interview results were the sources for the review of the literature. Morehead State University Camden Carroll Library, Morehead State University Communications Department Library, and University of Kentucky Library were the first places for researching the information. During my internship at CNN Washington, DC, in December and January, I had the chance to go to Smithsonian-Freer Gallery Japanese and Chinese Sections, Phillips Collection, CNN Washington, DC Video Library, Georgetown University Library, Japanese Sasakawa Peace Foundation Library, Library of Congress, and National Archives. In February, I had the chance to go to the National Gallery of Art, Houston, Texas. All these visits helped me to understand and collect the data I was looking for. I would like to thank Izumi Nobuhiro, student at Georgetown University, for his translations from Japanese to English for me.

b. Interviews: In this study, I had the chance to conduct three formal interviews. Two of them were at CNN Washington, DC, with the ‘Larry King Show’ and ‘Crossfire’ studio lighting director John Otth on January 6, 1997 (see Appendix A) and CNN senior lighting director David Burman on January 10, 1997 (see Appendix B). The third interview was conducted on March 5, 1997 with KET Lexington lighting director Don Dean (see appendix C). I would like to thank CNN Washington, DC Intern Coordinator Virginia Umrani for
providing the chance for the interviews. At the same time, I also would like to thank KET Lexington Lighting Director Don Dean for his patience to my questions and production trips.

c. Writing the script for the videotape according to the information gathered:
This process started at the beginning of January and ended at the end of March. The script for the videotape involves two parts: The first part was the audio (information) and the second part was the video which would support the aural information with the visual sources.

d. Production period: This period started at the beginning of March when I felt that I was almost done with my videotape script. February 24, 1997, March 5 and 22, 1997 were the shooting days at KET Lexington. March 8 and 9, 1997 were the days for on-campus shots which includes shots in Ginger Hall Studio and Breckinridge Studio. April 17, 1997 was the day for shooting Dr. John Modaff's narration part. One remarkable point in this period was to create my own tele-prompter system according to the capabilities of the distance learning classroom. The Distance Learning classroom in Combs Building 211 was used for this purpose. The purpose of the tele-prompter was to help the narrator, Dr. John Modaff, to read the previously written text easily. I would like to thank Dr. John Modaff, Dr. Autumn Grubb, Tim Young, Tim Creekmore, and Yasmin Lambat for their help and participation in this regard.

e. Post-production period: This period can be basically called an editing period. It was the most stressful period. Working alone for hours in one little room was very stressful. The first step was to edit voice-over audio and then sync
the video according to the audio. Insert editing was used in this process. Tim Creekmore provided suggestions and assistance.


As a result, it can be said that from the very beginning to the end of the written and recorded thesis I had to control written, audio, and video sources as a part of my thesis. I hope both the written source and the videotape will be helpful to other people who are interested in this field.
Review of the Literature

Gerald Millerson’s *The Technique of Lighting for Television and Motion Pictures* (1982) was the most important source that I used. It was the key source regarding different lighting applications and lighting styles as a result of those applications. The nature of light and visual world and their relation to the principles of lighting are extensively discussed in his book. Millerson is the only source that defines Silhouette, Notan, Cameo, and Rembrandt lighting in one volume. However, even this source lacked information about how we can create those lighting styles. He does explain how we can re-create “three dimensional world in the flat picture” (Millerson, 1982, p. 194) with the help of lighting styles. Gerald Millerson’s book can be used as a key source for the people who are interested in lighting and lighting styles. On the other hand, his book, *TV Lighting Methods* (1975), is totally different from *The Technique of Lighting for Television and Motion Pictures* (1982). Millerson focuses on more practical information in his first book. The use of maps, drawings, and pictures help the reader understand the hands on experience about lighting. It can be said that Millerson’s first book may be used as a map to short-cuts in lighting, and his second publication can be used to become more expert in theory and know-how of lighting.

Gerald Millerson (1975) says of lighting, “whatever the subject, our lighting generally has similar fundamental purposes. We want to bring out characteristics that are appropriate for our needs, and perhaps suppress or conceal others. We light to give emphasis, or even to over-emphasize specific features. In broad terms, we usually light for visibility, for clarity, and for decorative effect...Light influences where we look, how we feel about the scene before us, and determines how we interpret pictures. Light reveal
and conceals. By our choice of lighting we can show texture, emphasize or suppress it.

Our impression of shapes, spatial relationships, and size, are all modified by lighting treatment” (Millerson, 1975, pp. 14-15). After explaining the reasons for lighting in his first book, Millerson lists the functions of lighting in his second book. According to him, the lighting helps us:

“1. To direct attention to specific areas, giving prominence to particular features, subduing others,

2. To reveal shape and form, giving an illusion of volume, contour, size and proportion,

3. To establish environment, displaying subjects’ surroundings, spatial relationships, scale, perspective,

4. To characterize the subject and its surroundings, establishing mood, atmosphere, time,

5. To develop compositional relationships, developing and unifying tonal proportions,

6. To maintain visual continuity of the above factors,

7. To satisfy the technical requirements of the system, its brightness and contrast limits” (Millerson, 1982, p. 74). At the same time, Millerson does not show the importance of lighting on texture in those steps. Dr. Michael Biel points out that one function of lighting is to “reflect the surface-texture of objects in the scene, and in this case, angling the light can be effective on the light-surface relationship” (M. Biel, personal communication, 1996).
According to Gerald Millerson (1982), lighting styles are generally related to the purpose of the programs or the dramatic structure. He believes that lighting style is also a part of creating atmosphere. Parallel to his explanation, "silhouette lighting relies entirely upon subject outline, completely obliterating the color, tone, texture, and surface modeling of the subject. We meet silhouettes in decorative applications (e.g. ornamental shows), dramatic effects and when shooting against the sun (contre-jour).

Fundamentally, the subject is in each case unlit but placed against a bright background" (Millerson, 1982, p. 194). He explains cameo lighting as: "Action against a totally black background is referred to as 'cameo lighting,' but it is in fact, a staging effect with low-key treatment" (Millerson, 1982, p. 196). "The term is often used erroneously, to indicate a neutral or unrecognizable background behind subjects" (Millerson, 1975, p. 146).

Millerson in his two books also explains Notan and Rembrandt lighting. Notan lighting is "a pictorial style in which one is concerned with surface detail and color, and outline, rather than an illusion of solidity and depth" (Millerson, 1975, p. 147). "Its emphasis is upon presenting a flat, two-dimensional effect in which pattern and surface detail and color predominate. We achieve notan effects with flat, low-contrast lighting and negligible back light. Shadows are eliminated as far as possible. This technique is mostly used for fashion shows and large-area dance routines...The area is flooded with light (mainly frontal), visibility being the main concern. The result tends to notan. At best, one can distinguish subjects from their surroundings; at worst, the result has low pictorial appeal, as flat lighting creates ambiguously merging planes. Color and tonal variations, and surface detail are relied upon entirely to convey information" (Millerson, 1982, pp. 194, 197). In his second book, he describes Rembrandt lighting. Rembrandt
lighting “is achieved by carefully controlled tonal gradation, planar brightness, tonal separation and shadow formations... When skillfully handled, this style possesses an arresting, persuasive vitality. Many painters, such as Rembrandt, Caravaggio and Dali, have achieved remarkable three-dimensional illusions in this way” (Millerson, 1982, pp. 195-196).

KET-Lexington lighting director, Don Dean, stressed a different point about lighting. According to him, lighting is basically “directing the attention of the camera or the audience...whatever the audience might be to the subject that you want to dramatize” (D. Dean, personal communication, 1997). He indicates that lighting styles must be created according to the emotions of the productions. According to him, “silhouette lighting is a dramatic style...This would normally be used for mysterious purposes, dramatic purposes...Cameo lighting is the subject, which is lighted, no light in the background...when you have the subject lighted against dark natural background; probably dark enough to direct...there is no information in the background” (D. Dean, personal communication, 1997). He states that the most used technique is Notan lighting. It can be used in multiple camera productions, especially in talk show programs. Rembrandt lighting is the most attractive lighting style according to him. It is a dramatic style and helps us to gain the viewers’ attention.

CNN Washington, DC Bureau’s lighting directors tell of different reasons for lighting. CNN Washington, DC Bureau’s senior lighting director, David Burman, believes that light in the studio is “the artificial illumination of a subject or a mimicking of a sun light on an object” (D. Burman, personal communication, January 10, 1997). According to Burman, “Cameo lighting is hard light coming straight into the subject or
you have complete fall off into the background and going into the infinity...Rembrandt lighting is more on the style of the Rembrandt painters where lots of reds and blues and color contrast coming in from that source...Notan lighting has no contrast...and has a bland look” (D. Burman, personal communication, January 10, 1997). John Otth, lighting director for the Larry King Show and Crossfire, believes that “lighting in studio is to convey the mood that you are experiencing at the time” (J. Otth, personal communication, January 6, 1997). John Otth indicates that the use of fluorescent lights in studio will be helpful for Notan lighting, because these light sources have diffused light. He also believes that Rembrandt lighting must have a heavily modeled look.

Gerald Millerson also shows the reasons for color measurement in his second book. He points out the reasons in seven steps:

1. To judge whether incident light is reasonably near (+-100K) the color standard to which your system is balanced,

2. To note the color quality of the light for subsequent film laboratory compensation,

3. To see how much adjustment is needed to color-correct a luminant known to be unsuitable,

4. To check whether the light’s color quality has altered during shooting,

5. To balance several light sources to the same color temperature,

6. To ensure continuity in color quality for shots recorded are different times,

7. To determine whether local, or general correction to lights, or a lens filter will best provide rapid convenient correction” (Millerson, 1982, pp. 380-381).
James R. Caruso and Mavis E. Arthur, *Video Lighting and Special Effects* (1991), point out the importance of lighting in television productions. They show that the television production is a complex work, which involves many different steps. Caruso and Arthur focus on the lighting in television productions. They believe that the elements of light and shadow are the main points in lighting design for video. These authors state that, “you will discover how to decide what look will work the best for your video and what it will take to create it. You will begin to see how light affects everything in television both creatively and technically” (Caruso & Arthur, 1991, p. 1). Caruso and Arthur also show the importance of lighting instruments used in television productions. They explain the different spot and flood light sources. In addition to lighting sources, some other lighting equipment like the umbrella, the cyc light, barn doors, the flag and the scrim are demonstrated in their book.

Another source for understanding the lighting for video and its equipment is Des Lvyer and Graham Swainson. Their book, *Basics of Video Lighting* (1995), is especially detailed on lighting accessories used in video lighting. Barn doors, flags, scrims, and use of colors and shapes are examined in their book. The authors show how we can use these different lighting accessories in our creative lighting work. Lvyer and Swainson support the idea that the lighting must be built up according to the program type. It can be said that the art of lighting in the studio will be very primitive without lighting accessories.

Richard H. Palmer, *The Lighting Art: The Aesthetics of Stage Lighting Design* (1985), focuses on the stage lighting. He explains stylish lighting according to the production styles in eighth chapter. According to him, “style is a distinctive way of doing anything: hitting a tennis ball, composing a painting, or designing lighting. In one sense,
every video or television production has its unique style, but we generally use the word to
describe a recurring way of doing things characteristics of a given director, or designer.
Obviously, style can be expressed on a number of different levels simultaneously within a
single production. The style of the lighting design must grow out of the style of the
production...It is not sufficient for the lighting to provide visibility, modeling, coloring,
and focus; it must also make a stylistic statement consistent with the entire production”
(Palmer, 1985, p. 120).

Richard Palmer also explains the way Silhouette and Rembrandt lighting are used
in productions. “Light emphasizes shape by calling attention to the silhouette of an
object or surface. This can be done by heightening the contrast in brightness or color
against the background or by creating a dark or bright rim around the shape...(Rembrandt
lighting) creates the illusion of shape but also to strengthen the appearance of forms that
do exist on studio and to exploit the variety of appearances these forms can take under
different lighting conditions” (Palmer, 1985, p. 59).

TV Lighting Handbook (1977) by James K Carroll is a very detailed source on
background and foreground lighting in television productions. It helps us to understand
cameo and silhouette lighting styles according to the changes in foreground or
background light. Carroll explains the characteristics of cameo and silhouette lighting
parallel to the sample pictures and drawings. The three important characteristics of
cameo lighting are “the presence of a dark, indistinct, or unfocused background: brightly
illuminated objects located in the foreground in sharp focus: and a well-illuminated
central figure found in the middleground” (Carroll, 1977, p. 156). He also points out the
important steps in silhouette lighting. The light-dark ratio, bright background, and dark
foreground figure are the main points in silhouette lighting according to the author. James Carroll briefly states that, “the foreground is recognized only by its outline, details of which act to enrich the picture” (Carroll, 1977, p. 160) in silhouette lighting.

Notan: The Dark-Light Principle of Design (1991) by Dorr Bothwell and Marlys Mayfield is probably the only source written in English about Notan art. It was the most important source to understand the concepts and principals in Notan lighting. Bothwell and Mayfield stress one important point in Notan lighting. We have to be aware of the interaction between positive and negative space in our design. This interaction helps us to understand the relationship between equally lighted areas and the subject in Notan lighting.

Additional to Dorr Bothwell and Marlys Mayfield, there are some other sources, which are helpful to understand the Notan art. Paul Siudzinski’s Sumi-e: A Meditation in Ink: An Introduction to Japanese Brush Painting (1978) can be used as a beginner’s source in Notan lighting. Siudzinski states that, “as you look at the blank white paper, keep your attention on both the inner and outer universe” (Siudzinski, 1978, p. x). This statement is parallel to the technique used in Notan lighting. We do not only try to have shadowless subject in the scene, but we also try to eliminate all possible shadows in outer space of the studio.

Takahiko Mikami’s Let's Try Sumi Painting (1985), Sadami Yamada’s Complete Sumi-e Techniques (1984), and The Art of Sumi-e: Appreciation, Techniques, and Application (1984) by Shozo Sato are necessary sources to understand Notan art and its use in lighting. According to these sources, Notan art is a part of the Sumi-e art. It is basically the equal distribution of the light on white paper. Traditional Sumi-e examples
prove that we try to limit the shadows as much as possible on the paper. We see the same application in Notan lighting in studio. Our purpose is to have shadowless lighting. Takaaki Matsushita's *Ink Painting* (1974) is also a good source to analyze the distribution of light and dark areas in Japanese art. The art of ink and water can be carried to the relationship between the subject and the shadowless lighting.

*Oriental Art* journal can be considered as a main source to understand the principals and background of the shadowless lighting- Notan lighting. Peter Glum’s article in *Oriental Art’s Winter 1981/82 and Spring 1982 editions*. Peter Glum uses the chiaroscuro lighting in art to explain shadowless lighting. He points out that the modeling is the main concern in chiaroscuro lighting (Glum, Winter 1981/1982, p. 398). Another point that he addresses is the rejection of chiaroscuro lighting, especially Chinese and Japanese, in oriental arts (Glum, Winter 1981/1982, p. 400). As a result, Peter Glum indicates that the white silk can be understood as a white shadowless area in lighting. The images on the white silk are similar to the characters and the objects in shadowless lighting (Glum, Spring 1982, p. 54).

Ross Lowell’s *Matters of Light and Depth: Creating Memorable Images for Video, Film, & Stills Through Lighting* (1992), was one of the most interesting source in lighting. The examples used in the book were part of our daily life experiences. Different ways to see the light in our lives and in our work, and famous painters’ contributions to the understanding of the light were interesting points in Lowell’s book. Analyses on Rembrandt’s and Caravaggio’s paintings are helpful for us to understand the dramatic lighting. At this point, Lowell points out the importance of the soft side light in Rembrandt lighting.
Thomas D. Burrows, Lynne S. Gross and Donald N. Wood, *Television Production Disciplines and Techniques* (1995), explain every aspect of television production in their book. All the elements necessary in television productions are discussed and demonstrated by them. Chapter 4 in their book focuses on television lighting, its equipment and techniques. Burrows, Gross and Wood mention that lighting in television productions is an artistic and creative work. They discuss the ways of achieving focus of attention with the help of lighting styles. According to them, Cameo and Silhouette lighting are the two main lighting styles to achieve focus of attention (Burrows, Gross, & Wood, 1995, p. 70).

Burrows, Gross and Wood uses drawings and pictures for us to understand the effects of different lighting sources. Parallel to their explanations, back light is the main light source for silhouette lighting. “A silhouette effect may be desired for a dance routine or other special situations. A single shaft of light may be used to accent a contestant in a suspenseful climax of a game show. The host of a documentary may be accented with a strong back or side light” (Burrows, Gross, & Wood, 1995, p. 71).

Cameo lighting is basically created from the position between key and fill lights. Contrast to the Silhouette lighting, we do not use back light in Cameo lighting. “A good silhouette demands an evenly lit background, balanced from top to bottom as well as from side to side. A good cameo effect, on the other hand, requires a complete lack of any light hitting the background; front lighting must be controlled to make certain that no spill is reflected onto the set behind the talent” (Burrows, Gross, & Wood, 1995, p. 82).

Burrows, Gross and Wood explain the necessity of Notan lighting in today’s television productions. According to them, “with television’s multiple-camera formats
and continuous action productions, lighting directors have found it difficult to adhere to
the concept of classic three-point lighting. In the talk show format, for example, the host
or the hostess moves to people in the audience and the cameras must shoot from many
angles. The solution to this situation is to create an overall wash of illumination
throughout the entire set. Many soft fill lights (fewer keys) are used from all possible
camera angles. The result is what is called ‘flat’ lighting because the faces take on more
of a flat look as differentiated from the shaped effect of shadows created by a strong key.
It is a workable solution to a common lighting problem” (Burrows, Gross, & Wood,
1995, p. 84).

*Video Basics* (1995) by Herbert Zettl is another source on television productions.
His book is more focused on the relationship between digital video production and the
principles of television production techniques. Zettl stresses two important points for
lighting: light and shadows. Herbert Zettl considers shadows as a part of everyday life
and he carries this idea into his video production theories. The author does not really
focus on the lighting styles, but he demonstrates the various uses of three-point lighting
in television productions.

Herbert Zettl (1995) points out the importance of soft lights in Notan lighting.
According to him, we should try to eliminate the attached shadows. If we are able to
eliminate them, we can have a flat look. He states that, “many news and interview sets
are lighted flat (with equally strong soft lights for key and fill) in order to show the close-
up faces of the news people or guests relatively wrinkle-free” (Zettl, 1995, p. 140).

One of the most important points Zettl makes is the use of lighting equipment in
productions. He proves that the lighting directors may not have to use additional lighting
sources. Zettl shows us how we can use reflectors, umbrellas and other sources instead of additional lighting sources (Zettl, 1995, p. 146). We may come to one point that we have to realize the economics of the productions even if we have to work on a creative or a stylistic production.

Both Herbert Zettl’s, Video Basics (1995) and Thomas D. Burrows, Lynne S. Gross, and Donald N. Wood’s, Television Production Disciplines and Techniques (1995), books are also necessary to understand the effect of lighting on overall television production. They help us to understand the importance of the relationship between lighting and the other parts of the television production. For example, we can not think lighting without graphics. At the same time, the sound must fit the environment and the mood created by lighting.

The Film Encyclopedia (1993) by Ephraim Katz helps one understand every aspect of television and film productions. Katz’s explanations are especially helpful in understanding the use of light sources in Silhouette, Notan and Rembrandt lighting. He also goes back to the historical background of these lighting styles for his explanations. According to him, we have to avoid highlights in Notan lighting. This helps us to provide even distribution of illumination on a set. When the author describes Rembrandt lighting, he uses historical background of the Rembrandt lighting. “Rembrandt lighting is a Hollywood term for dramatic lighting with pronounced shadows, somewhat reminiscent of the tone of Rembrandt paintings. Many cameramen and directors claim to have introduced this type of lighting to motion pictures, but the phrase ‘Rembrandt lighting’ is attributed to Cecil B. De Mille. He supposedly responded to a telegraphed complaint
about the clarity of actors’ faces in one of his films by explaining he was employing Rembrandt lighting” (Katz, 1993, p. 1138).

Richard M. Blumenberg’s Critical Focus: An Introduction to Film (1975) is basically about film productions. Film theories, literature and film, different film structures, and the steps of film-making are examined in his book. The important piece about the lighting in the author’s book is the use of back light. He states that “back lighting (which illuminates the subject from the rear) can create an eerie effect; it can present silhouettes” (Blumenberg, 1975, p. 74). The important thing we see here is the similarity in use of lighting between film and television productions. Lighting principles we face in both productions are usually the same.

Another important point Blumenberg shows is the relationship between other art forms and the lighting. As we know, some of the lighting styles have their roots from famous painters’ works. According to Blumenberg, lighting can be understood as painting; “lighting can be used to create everything from three-dimensionality to a feeling of softness...” (Blumenberg, 1975, p. 74).

The TV Director/Interpreter (1968) by Colby Lewis shows the responsibilities of the director in television productions. The director must consider himself or herself as a part of the audience. Basically, the director is in the role of interpreter. The director does not only control overall flow of the production, but he/she also controls the pictorial statements, visual clarity, consistency, visual transitions, and other related factors. Lewis stresses that the lighting takes an important part in these production pieces. Colby Lewis also gives a specific example for the use of cameo lighting. “When close-ups are needed of miniature subjects (coins, stamps, watch dials, etc.) which are being used by
performers, you can try to get duplicates of them to be shot in cameo (i.e. in some convenient place outside the playing area) by a camera which has sufficient opportunity to frame and focus them properly from as close a distance necessary... Shooting in cameo will give the cameraman a better opportunity to focus more closely, if need be, by changing the distance setting on his lens barrel. It will also allow him to move close enough to the subject to use an extreme wide angle lens” (Lewis, 1968, p. 41). As we can see, the intensity of light or lighting style can be effective on determining the lens we use in our productions.

Lighting can be considered as a source that transforms the image into a message. This message is either psychological or any other way. Steve R. Cartwright, Training with Video (1986), mentions that “lighting is used primarily to illuminate the subject so that the camera can see. It is used to enhance either a simulated environment in a studio or an actual environment or location. Light helps in composition, creating shadow, color, texture and form. Lighting can also be used to create a mood, a psychological condition that would not naturally be present. The video director uses light to create images that the camera will record. These images become the message” (Cartwright, 1986, pp. 84-85).

Lighting the Stage: Art and Practice (1967) by Willard F. Bellman proves how we can understand lighting as art work. Elements in art like psychological, physiological, and mechanical factors are discussed in terms of lighting on stage design. The source may seem old according to its publication year, but it shows the essential points in art-style lighting. Art-style lighting is shown for stage work in this book. Parallel to the explanations, we can easily carry the stylish lighting for video productions. Bellman
explains the use of scoops. “They are very efficient and produce even distribution of
light over a wide area...The purpose of any floodlight (for example, scoops) is to do just
what the name implies, to flood the stage with light. The more evenly distributed and
brighter the light for a given wattage, the better” (Bellman, 1967, p. 39). The use of flood
in Bellman’s explanations match with the use of light in Notan lighting. We try to create
even distribution in a wide studio area. Our purpose is to eliminate shadows as much as
possible.

Willard F. Bellman also points out the importance of back light in Silhouette
lighting. Actually, the example he gives is from theater, but we see the same applications
in electronic video productions in studio. According to him, in Silhouette lighting,
“overhead back lighting is used. Instruments, usually of high intensity, are mounted
above and somewhat behind the acting areas. These lights are angled downstage but not
enough so that their light passes over the footlight line. The results vary, depending on
other lighting conditions and upon the actor’s complexion and costume” (Bellman, 1967,
p. 239).

Lighting the Stage: Art and Practice (1967) also demonstrates the various lighting
sources in detail. The explanations about the use of color in combination with different
light sources are helpful to understand the use of color in combination with light in
Rembrandt lighting. It can be said that the examples Bellman uses in his book can be
carried to the applications used in style lighting in studio.

Steven G. Taibbi’s articles about lighting in Videography magazine proves that
the new technologies in lighting may be helpful for cost-effective and stylish lighting.
Taibbi also suggests that the best thing in style lighting is the ‘keep it simple’ method. In
Videography (September 1992), “Less Is More”, Steven Taibbi stresses in his monologue in the article that “keep it simple” doctrine is easily applied to lighting. I say this because one of the most common mistakes I see in lighting is the use of too many instruments for the set-up at hand. Not only has there been a failure to keep it simple, but it would seem that many times a great deal of effort was expended to make it overly complex! It’s not only having more lights on a scene than is necessary usually doesn’t help the look of the production; moreover, it’s that it almost always detracts from it. Why? Well, first of all, for every light, there is a shadow. The more lights you use, the more shadows you have to deal with and control, and the more unwanted shadows there are on a set, the less appealing that scene will be…” (Taibbi, 1992). At the same time, Taibbi points out the importance of proper lighting according to the scene. In Videography’s November 1995 issue, he states that “…lighting the subject is the easy part, but getting the set to reflect the mood and texture you’re after is really what will make or break the lighting of a scene” (Taibbi, 1995).

Lighting Secrets for the Professional Photographer (1990) by Alan Brown, Joe Braun, and Tim Grondin may seem like the source is related with photography. We should realize that photography can be considered as the beginning point of video productions and the lighting used in photography is similar to the lighting in video productions. Brown, Braun, and Grondin’s book is helpful to see the professional experiences about lighting styles. Joe Braun’s introduction is very informative about his experiences about photography, the lighting, and the lighting styles. He expresses his thoughts: “Photography is about light; it’s more important than film or cameras or any of the other gadgets I use. When I was a photography student, I would go out and observe
light and record interesting or unusual situations in black and white. I photographed all kinds of light: light reflected in wet gravel, light streaming through windows, the street lights after dark. This is a valuable exercise for a photographer, because it makes you appreciate the unique characteristics and the range of emotions that each different type of light conveys. Light is also a tool in the studio. I use light to capture the essence of products and people. I try to light my subject with one of the types of light I remember from my observations in nature. I then shape and refine that light to define the important features of my subject. But I try to do it in a way that doesn’t lose the mood I want to get across. I think the key to using the light successfully is being able to balance rendering detail against creating a dramatic effect. You can get too caught up in trying to render every little detail of a subject and end up with lighting that has no mood or emotion. At the other extreme you can use light solely for its dramatic effect and too many of the important details of the subject are lost or obscured. You have to be able to light a subject so that you show its features clearly and capture the mood or emotional impact of lighting” (Brown, Braun, & Grondin, 1990, p. 7).

Alan Brown, Joe Braun, and Tim Grondin also mention the use of shadows in a creative way. According to them, "shadows add interest and excitement to an image. You can introduce atmosphere, create a mood, or suggest a sense of a time and place by making shadows important in a shot. Practical considerations play a role, too. For example, the highlights are often a given when you work with a light (especially a white) or bright subject. You need to introduce shadows to create shape and give definition to your subject" (Brown, Braun, & Grondin, 1990, p. 71).
The sources gathered in the review of the literature represent various fields. In addition to lighting and video production sources, sources from photography, film, and art fields are necessary to understand the relationship between art and light. There are very limited sources for stylistic lighting in the studio. Professionals’ opinions and/or examples from television may be helpful to see the facts and the examples in stylistic lighting. The review of the literature can be accepted as a guide. The suggested technique is to use the information gathered in the review of the literature while working on lighting styles in the studio.
References for the Videotape


NBC. (1997/June).


TLC Learning Channel (1997).


References


INTERVIEW WITH JOHN OTTH,
CNN STUDIO LIGHTING DIRECTOR
“LARRY KING SHOW” AND “CROSSFIRE”
8 YEARS IN CNN
JANUARY 6, 1997, 2:00 P.M., CNN CONTROL D

Q: According to your experiences, what is the purpose of lighting in studio?
A: It is to convey the mood that you are experiencing at the time, if you are putting on a straight news story you will want to have well-illuminated face, sometimes it ends up being flat, sometimes it’s got a little modeling. But, basically you want to be able to see the person’s eyes, because that is where the messages conveyed and one of the little darker. It starts suggesting more of a dramatic effect in the picture, so basically you are trying to convey a mood, if you are doing a real intense interview with people about a serious topic; drug abuse or some kind of heavy topic like that, but heavily modeled side can be as more of a serious tone to the interview.

Q: And, according to your experiences, what is stylish lighting?
A: It is anything that deviates from that flat looking and has courage that convey a definite mood one way or another.
Q: So, basically trying to get rid of two dimension and trying to reach other dimensions, can we say it?
A: Yes.

Q: What kind of equipments are you using in studio for lighting?
A: Basically, we have two types of fixtures. The fresnel light which is... has a lens and is focusable and it's controllable. Typically, that's the primary work because of the studio, because of its controllability and then, the second instrument is a soft light which is good for base illumination to get your basic level and angles covered and then you can also do special effects with a soft light of its uses as primary, key; depending on where it's placed, but basically these two types of fixtures. We also have cyc strips which we used to light the curtains sometimes, not too often.

Q: Barn doors?
A: The barn doors are part of the fresnels. Yes, we use the rely on the barn doors to get cut off and that's part of the controllability aspect of the fresnel texture.

Q: Do you use diffusers or reflectors?
A: We use, I use diffusion on all of the fresnels and it's the form of span glass diffusion. It softens shadows, getting back to that point where you never; a lot of times don't know where the camera is going to be and you want to be an even field, you can have a solid
modeling without too many nose shadows and head shadows on that chest and that’s done by using diffusion. I kind a like to use it just to soften the light.

Q: So, basically do you use diffusers for almost every light source?
A: Except for soft lights which are diffusing themselves. But, the another reason why we have to use the span glasses, because it’s a 12 ft. ceiling, it’s a low ceiling, if you have bigger studio, you can get the light object, light source, key light back further further back you get you can…it’s going to soften apparently.

Q: So, basically I found out that there are four main lighting styles: One of them is silhouette lighting, the other one is Rembrandt lighting, sometimes it is called quarter lighting, and the other one is notan lighting, it is called flat and the other one is cameo lighting. Can you tell each of these, how you can create them, which kind of lights you use, soft or spot?
A: Well, obviously you can get heavily modeled look by using either a soft light or a hard fresnel depending on the placement. If you just use one soft light, the further you move it off the access of the camera, the more modeled that is going to be. And then, actually it’s the same thing with the fresnel, you get more of a flat look when it’s head on, you get it off 15-20 degrees off the access, you start getting the nice modeled, and then even it’s more dramatic. That’s the key where you are placing on relation to the camera.

Q: That’s probably a Rembrandt, for flat do you have to use proper lighting?
A: Well, we use soft lights on all sets. ‘Crossfire’ uses the cedestant light system, which is fluorescent based like this. Fluorescent tubes and you know fluorescent light is flat. Light itself. That ‘Crossfire’ lighting is consistent, just a 360 wrap of fixtures, so it’s going to give you very even from all angles and for that show it serves for its purpose well. Also, the news anchors are using that system, the others. But, ‘Larry King’ and the all other talk shows that are done in utility set, which is our main talk show set outside of ‘Crossfire.’ We even use soft lights to give a good base illumination and coverage. ‘Larry King’ only has one soft light on the outside area, and two smaller soft lights in the inside fill. And, soft lights give a nice fill when used inside the staging area.

Q: Can we say that you are trying to be shadowless in these show programs?
A: Out CNN, they basically want that kind of look. Shadowless and that in the aspect that there is no nose shadow too prominent or head shadow that is prominent to the point or you can see the person’s mouth moving on his shoulder. That I know from experience when we set this bureau up…the lighting, but that’s what they didn’t want and it seems to work. You can get modeled look by the way without nose shadows, mouth shadows…it’s careful placement of the fixture in relation to the where the person is looking, if the nose is pointing and the camera is, you can get a modeled look.

Q: So, the last two: silhouette and cameo lighting?
A: Silhouette is, my understanding is that the background is lit and the person is dark. They are actually doing one of these right now upstairs where the background is bright
and no light on the subject and that’s there is not too much you can say about that that’s pretty basic.

Q: Are they using spot light for the background?

A: Actually, they are using windows as a background and that’s not even a consideration, but when I do it inside of the studio I use a neutral gray cyc in this, quite a lot light on it. Get the person away from the curtains as much as possible, and then if you want to do something stylized in that silhouette, you can certainly light their arm, slash cross their lower half of their body, stay away from their face and that kind a adds a little bit.

Q: We can use silhouette lighting for if you don’t want to show the identity or...

A: That’s really the only thing.

Q: Or if you try to dramatize?

A: Right.

(Pause: phone call)

Q: The last one is cameo lighting. What can you say about it?

A: That would be something that will be used in more in dramatic production, film or soap operas or TV commercial. You know, you can do a lot more on film with lights, because there is 1/500 contrast ratio, or in TV 1/200. And, that’s why it’s harder to get
more modeled look on camera, TV camera. That type of lighting, that’s something we
wouldn’t typically use here, because it’s just too much of a departure from you want to
allow, convey, credibility on the news, so we have background lit, viewers can be able to
see person’s face, both sides.

Q: As a result, do you have any advices for future generations trying to work on studio
lighting?
A: Well, I’m not a lighting guru. Everyone tries own style and the style that I look
typically want to use is a little bit too much from a departure from what we would use
here, but I try to get as much as you know possible an amount of modeling which turns
out to be minimal generally at best, but the most important thing for TV lighting of the
future is to try not to get hooked on cost saving lighting systems such as this fluorescent
based to the point where it’s so cheap, quick and easy that there is not allowed natural
aspect to the lighting and the more natural it is and there is, in real life, there is shadow
after, you can not have of course same amount of shadow you have in your life, because
TV camera has to be offered the good signal, but just try to maintain that and that would
be a challenge because a lot of it, broadcast stations in this country and probably around
the world had gone to fluorescent based and cost savings.

Q: The last thing, some authors or professionals say that the best lighting method is to be
simple...
A: That’s true, because every light fixture you add adds a shadow at some point.
Although at minimal, it does make the picture look rough. I can not be too much of the
hypocrite, because I use a number of fixtures on the, one of the utility sets upstairs, but that is an effort to cover all the camera angles and that gets back to why span glasses used, because that keeps the shadows down to minimum. You can add the fixture, but if you haven’t used and they have lower percentage levels, so hitting hard. If you lit, take 20 fixtures, shadows start blinding, so you don’t see it more. If you have 3-4 lights, you are going to see shadow for each light. Let’s get the keep it down to 1 or 2, you light with 2 lights; back light head and key...

Q: Thank you very much.

A: I hope it works out.
Q: Can you tell us your name?
A: Sure, my name is David Burman, I'm the senior lighting director for CNN Washington Bureau.

Q: And, according to your experiences, very briefly, what is light?
A: What is light. Light is the artificial illumination of a subject or the mimicking of a, sun light on an object.

Q: From that point, what is lighting?
A: Lighting is the, is the reproduction of, an original light source, which you would basically,... you basically mimicking two types of lighting. One would be tungsten lighting, which is 3200 degree Kelvin temperature and the other one, which is daylight lighting, which is 5600 Kelvin degree temperature, which is Kelvin temperature of the sun. Tungsten lighting is more warm and it gives you more areas toward the natural and HMI or 5600 Kelvin degree is more toward the blue spectrum.
Q: So, when we use those lighting sources, can we categorize them like hard light or soft light? Can we name them?

A: Right. Tungsten lighting is, is a lot more versatile, because you have a lot more control over the lighting instrument, regards to what you can, you can’t do regards to controlling... excuse me (coughing) the effects of the lighting instrument itself. There are many variables in lighting instruments from 100 Watt instruments all the way up to 5, 6, 7000, 10000 Watt tungsten lighting instruments that you can produce more than one look. Controlling the instruments can be done with series of diffusion medium gels, scrim soaks, you can use barn doors, you can use even sack stockings or shower curtain to diffuse light from its source to the object that you want to illuminate. With 5600 degree temperature you run more into a HMI light, which mimics the same color temperature of the sun and that’s a lot hard to control, they have, most of the HMI lighting is done with the fresnel lens; controllable with scrim soaks and barn doors, or you can use power HMI lighting fixtures, which are controlled with a series of different lenses, spots, mediums, narrows that you are putting, you know, in front of the lighting instrument itself, to give a different control over that and then you can barn door again and corrected that way. You can also take an HMI light and converted from 5600 Kelvin degree temperature to 3200 degree temperature by putting a piece of gel medium, which is called color temperature orange in front of the lighting instrument, which takes 5600 mimics to 3200 then. Gives a little variable there, so if you are in a situation like an office building that has a lot of daylight coming in and rather than have subject is look alike blue or you can just bounce an HMI off the ceiling and color corrected to 3200.
Q: Can you explain what is HMI?
A: HMI is very hard, it’s high light, it’s just a very very long board that I can’t remember what it is.

Q: That’s fine, so with these equipment we can control the light, soften or harder?
A: Yes, correct.

Q: With these lighting sources, we have four different lighting styles. If we can start with silhouette lighting, how we can create silhouette lighting? Where we have to direct the light?
A: Silhouette lighting is just a, the source of a light coming in from one side angle, which would give you a more profile look where you would have light source coming in from one side of the face where the other side would be basically going often to the shadow. Then, you have cameo lighting, which is basically a hard light coming straight into the subject or you have complete fall off into the background and going into the infinium, infinity. Rembrandt lighting is more on the style of the Rembrandt painters where lots of Reds and blues and color contrast coming in from that source and then you have, what is basically known as flat lighting for television, which everything has no, no contrast, there is no realization to that at all, the thing with television camera that they see light and dark, the camera always sees light and dark, it sees nothing else, so basically when you flat light everything and you make everything of very bland look with no
modeling features to the face and more like a silhouette lighting effect. The subject matter turns more generic and they look more flat against the background.

Q: So, probably everywhere is bright.

A: Everywhere is bright, you have no, no real features and then a lot of television stations use that because they have so many anchors popping in and out of the chair at the same time that rather than having a lighting director go up there and re-light for every individual, which sits in the chair and, which is a lot of work. They just do this generic wash light, which brings up the levels, so the cameras can see between light, shade and then they can refine their details in the control room, they sharpen the images little better.

Q: So, when we think about those four lighting styles, can you tell in which programs we can use them, for example, notan lighting or flat lighting probably we can use them in show programs, big show programs, we don’t have to arrange lighting again, again, again, so do you tell us that I mean specific programs fit for silhouette or...

A: Sure, one you have your talk shows, your basic talk shows where you have a grouping of 4 or 5 or 6, more individuals in around round table that type of a set with one moderator or even two moderators, basically, which one of these do is bring whole level of the setup and then accentuate some of your backdrop with your set pieces with head edge light to bring the back group up to siege, get some separation of depth of field. For one on one type of an interview, most of the time what I like to do is I like to do a silhouette lighting to give the subject who you are interviewing little more character, you can make them if it’s a investigative type of report and you wanted to be that this guy is
the bad guy who is..., you can portray or light them in cinister way, which makes it look like he’s coming from the evil empire. If you have a more upbeat type of an interview, you can use the same silhouette lighting, but at cosmetic gels to give a little bit more color, little bit more flair and to make whole interview seem little bit more vibrant and bright. When you do the more art scene type of interviews, where you are doing and then you would have your background slick with various colors and you would have a lot of plants to pop out color, a lot of cut flowers, you highlight the cut flowers, you put some color...on the back and you might want to light the body in one color and head and shoulders in another color and graduated that way that would give you that kind of a look that give you something that ankle.

Q: As a result, as a professional in this business what would you advice to students working on lighting? What would you advice; would you advice them to use more light to provide key or would you advice prefer them to be simple?
A: In my experiences, which ranged from everything from local bar bands to theatrical touring for national groups to theater cabarets and so forth and right on up to that television and movies. I learned that when you, when you over light you end up fighting yourself. The more light you put up, the more you have to control the shadows. The more you have to control the bounce of that light and, so the more you put up, the more work you’re putting to yourself in regards to doing it. Basically, you put so much light up...one instrument coming from one angle, then you end up flagging off the light spills. Then you’re putting another light up on the other side to fight that angle and shadow, you basically, you’re working yourself into nod, you constantly have tons of equipment out
and you’re fighting yourself all day long just to get the set look alike. If you’re coming with the basic simple three point light at the first, key, fill and back light to get your subject lit and then work from that scenario on up, then you can find tune. If you come in basically lighted and get it to that certain level you like and then you can always add little bit here and there, and accentuate. Movies have tendency to over light, they just pump in tons of gear and if you’ve ever been a movie set; a lot of scrims to block the sun, a lot of guys working. And then another group is working on and gaffer is working on and then elevator is working very hard just to get the set lit. It’s a lot of work.

Q: And, probably we have to consider that economy of the production compare to studio.
A: Correct, that’s labor intensive and that’s very cost ineffective, it cost a lot of money to light a movie and it costs a lot of money to light theatrical work shows and it costs a lot of money to do legitimate Broadway theater and costs a lot of money to do rock’n roll band in a night club, it’s expensive and it’s time consuming. The thing that I’ve learned is that no two lighting scenarios are ever the same, you have different variables in everyday, even if you are lighting a talking head in the same room in the same day, you don’t want the same look. If you’re doing more than one interview in the same day in the same location, you can light them differently with the three or four point lighting stands and extend from that, but your key light on a different angle coming little higher, coming little lower, coming from the right, coming from the left, coming from the different angle and you get a different look and you create a different look as you work. It’s just a… it’s a thing you can read as many books as you want on the subject, you can look at as many diagrams as you want, you can go through all of the generics that go into school of
lightings, design and they all come back to the basic three point or four point lighting stands and extend from that, but the only true way that you really see what’s going on as to physically get out there and put your hand on the equipment and play with it, see what effects you get and that’s a hands on experience, the more you do the more you learn and you ask a lot of questions and a lot of people are very generous with their information and some people won’t tell you anything. It’s their secret and they won’t tell you anything and they won’t share and I’ve always been the one that you know I don’t have anything to hide and my style is different from your style and your style will be different from someone else’s style and no two styles are ever the same and eventually as you get established then you have reputation and your business whatever you do, people can identify your lighting by your lighting, by your style, because it starts to get its own signature and people will say wow you know that I know who did that that’s Dave Burman, he did that one, that has a certain look toward to it, has a certain feel to it and other people, you can tell their lighting style and design, because they have a certain look and a certain signature and... a lot of people say you can’t mix tungsten and HMI lighting, daylight lighting together, you can’t mix color temperatures, which is you can. And there is all these books that say well you can’t mix 5600 and 3200 Kelvin temperature together, you can and it just gives you completely different looks and it depends on how artistic and how creative you want to be and the creativity is in the individual and what they acquire along their journeys and proficiency. It’s fun and their two jobs are the same, it’s exciting and it’s and it’s very rewarding one when you have something that that you see you worked hard at that and it looks good, everybody is happy with it and that’s real rewarding, you know they only come to you really when it
looks bad. They come to you when it looks bad and they say what about this and well
look at the situation we're in, you can't make excuses, because it's visible, it's very
visible medium, you can't...if it's shadowy it's shadowy and you can't make any excuses
for it; it has to be the way they want it and has a certain flair...I enjoy it.

Q: The last thing. I notice the stylish lighting, so is stylish lighting signature of the
lighting director?

A: It can be, correct. Most television medium now there, because they have so many sets
there are lit. They are using a lot of generic type of lighting looks, they are using the
vidascent lights, which are very flat fluorescent tube light, which is very unflattering at...
it makes the talent look very pasty; they are heavily made up to give them color and if
you light a set with tungsten then it's one from the beginning, but the difference between
the two lighting instruments is that one is hot, one is cool to the talent. The vidascent
lights are also very energy efficiency that a lot of companies are just cutting back on their
cost for that, but in regards to signature lighting... it is the art of the designer and it is the
art of the person who is lighting it and it is their look and the look they want to achieve is
their own personal signature and their style, everybody has a certain style and it's the
same way when you go and see rock'n roll shows, every show is different and every show
is different, because every lighting director and designer has a different look for that
show, it's a different style, it's a different mixture of mediums and lighting instruments
and television lighting can be very mundane and very flat and very boring, but if you put
a little bit of yourself into it, say maybe I can try this, let's see what it looks like. When I
first came here, CNN was very used to the very flat generic look, when I first came here,
and they hired me to do this, I lit an interview, we lit them in the silhouette lighting style and they were appoled at first, because they were, they weren’t used to seeing that and they weren’t used to that style, and they weren’t used to anything and it wasn’t this way, it’s not the way and eventually we started lighting them, with a lot of cameras, a lot of really nice looking thing, a lot of really nice looking things, a lot of heavily modeled looks and they started getting used to it and then it looks pretty good, that’s not too bad, so we sort of shifted them to the look that they are looking at now on their interviews and now if it’s not that and now they want to know what’s wrong with it. So, it’s been very rewarding and very... they’re good to me.

Q: What were the most remarkable productions you participated in?

A: I spent 12 years on the road in rock’n roll way, I was out touring nationally and internationally with many many national... I was out with Simon and Garfunkel and Billy Joel and Leonard Skinner, and... Neil Diamond and a lot of the old 70s ex sticks and Kansas and Foreigner, Bad Company and Led Zeppelin and The Who. 12 years on the road takes a real toll on you, but the experience of that was, it was once in a life time thing, that happened. I learned a lot from that then when I transcrest into doing commercials and motion pictures, and things like and that was another reward on the self, but when you do television lighting and in this position the opportunity for you to meet kings and queens, heads of the state and entertainment people and world around artist, musicians and it’s just been fascinating and you really can’t pin it down to one individual thing, you know we’ve done one on one interviews with president of the United States, which didn’t get any better than that, one on one interviews with Barbara Streisand and
Julia Andrews and it just goes on and on and very fortunate to be in the position that I am and I’m very fortunate that they’re giving me the responsibility to do that and everything is just overwhelming, I’m overwhelmed, but I’m not astroc, I’m not dumb founded by it and I also find out very rewarding, but there is sometimes when we do some interesting and eventful things, I mean just put your finger on anyone, everyone of them is just a remarkable experience that’s I am fortunate that I’ve been part of.

Q: Thank you very much.

A: I hope I answered all your questions best of my ability.

Q: Thank you very much, I appreciate.

A: You’re quite welcome.

Q: Thank you.

A: Anytime.
Appendix C

INTERVIEW WITH DON DEAN

KET LIGHTING DIRECTOR

MARCH 5, 1997, 10:00 A.M., PRODUCTION STUDIOS

Q: Mr. Dean, thank you very much for contributions to my thesis and I have few questions. First, what do you think, what is lighting?

A: Lighting is a...well, it's directing the attention off the camera or the audience...whatever the audience might be to the subject that you want to dramatize.

Q: And, what kind of sources, lighting sources or equipment we can use in the studio?

A: Well of course, what is a studio? Could be any place you work. And, so the sources of light could be anything from the sun, reflections of the sun through with mirrors or even white card board, any white colored reflective surface or it could be any number of, types of commercial lighting instruments. A light source could simply be a desk lamp or it could be a candle or a match.

Q: And, what do you think about style lighting? What is lighting style?

A: In my work, what I try to do is assess an environment. See what...what the available light is...the ambient light...then make an assessment of my tools, my equipment to see what I’ve worked with and then, I’ll refer to the character or quality of the production and
try to see if I can support the character of the production with the particular style...that’s consistent with emotions of the production and able to execute within the environment and with the tools I have available, so...to some people...style is something that is contributed, that is fabricated. And, they will design a production around the style. I don’t do a lot of that type of work, that’s more stage work, for example, theater work. I try to develop a style that is determined first by the production; the environment of the production and then by the tools and equipment that I have available to me. So, in other words, my style is more of a reactive style, which I think is supportive of a production rather than a style that demands to production to conform to that style.

Q: And, what is silhouette lighting for you?

A: Silhouette lighting is a dramatic style. It would be of course...you have a figure in darkness, in relief against a lighter background. This would normally be used for mysterious purposes, dramatic purposes; again, it has limited application in television. I think it’s probably more of a film and certainly a stage technique. We do occasionally use a silhouette lighting in television.

Q: What is cameo lighting?

A: Cameo lighting is a of course; when you have the subject lighted against dark natural background; probably dark enough to direct...there is no information in the background. There is simply...the subject, which is lighted, no light in the background. That is a more common technique often determined by necessity. You are working in the studio and you are after the production on limited budget on a short period of time where you don’t have
a set, you don’t have any budget to built a set. And, you don’t have any time to do some
creative treatment on the curtain or the cyclorama, then you may put the subject in the
middle of the studio with no other light. We call that limbo lighting. And, I am not a big
fan of limbo lighting for television. Again, it’s a better dramatic tool for stage or theater
or again film. I guess itself better, but the electronic medium of television does not like
large areas with no information in them. It’s better now that it’s become digital, but the
old tubes and analog equipment seemed to me would generate noise in areas where there
wasn’t any color or any light, so I try to have some kind of information in most of the
frame.

Q: Well, I think, the most used one is Notan lighting, which is shadowless lighting for
shows or talk shows. What do you think about it?
A: That’s very handy, because especially with multiple camera productions, because
the...the subject, the talent may address any direction, the camera can be in any position.
And, if you have a talk show, for example, as you’ve mentioned for the host is sitting
facing one direction, the guest is sitting facing the opposite direction. They may have to
turn to address to another, then if you have dramatic contrast ratios; you probably going
to have unflattering shadows and in some places the subject looking into a dark area,
which is not attractive. So, shadowless lighting is a very common type of lighting for
many...multiple camera productions, multi-person multi camera productions. The trade
off on that is that if you don’t support it with good graphics, good sets, that’s sort of thing
that can be dull and uninteresting. You have to have a good graphic support, set support.
They have to have all the other elements in place to make shadowless lighting look good in a viewfinder, in a frame.

Q: And, I found out that especially in soap operas, they use especially on characters, you know dark Rembrandt lighting, because probably they dramatize the scene. What do you think about Rembrandt lighting?

A: Well, I think that is the most attractive sort of lighting that you can use for most instances. I used it a lot, because we do a lot single person interview. A single person interview, documentary style. And, when you have the host sitting on next to the lens besides the camera, you basically can set your talent to the opposite side of the frame, then have across key on the same side as the host, so you get that good dynamic of the subject looking across the lens; your key light on the same side as your host, so your subject is a direct... basically addressing to the side that the key light is on. And, you can cut the face in half, and it’s very attractive if you can somehow get light into the face off side eye. For example, if the light is over here, you would have this side in light, but if you can throw this low part at the bridge of the nose, find this angle where it comes over here and it just lights the off side. That’s a good, dramatic sort of lighting that would get the viewer’s attention and then from the off side, then you can come in with reflectors or a smaller fill light; so you don’t have a dead space. And, then what I’d like to do with that sort of lighting is a draw on edge around of the shoulders and head with back lights and reflectors that will separate the subject from the background. Incidentally, one of the ways to create a type of shadowless lighting is to do that from both sides with equal intensities. Light here, light here, couple front lights. You would create a shadowless
lighting, so it is basically the same thing as...this would be a three point lighting set up, the Rembrandt type of lighting, a cross key, a fill and a kicker from behind and you duplicate that symmetrically on the other side. You get a good shadowless lighting. Good attractive shadowless lighting.

Q: Last two questions. I was told that because of the new technologies most of the lighting systems are changing. For example, my professors told me that now computers are in lighting art. Are you using computers or how you benefit from computers, I mean what is the importance of new systems, new computers in lighting?

A: Okay, our controllers are basically computers. They're digital computer controllers and the cameras are digital. They're much better. They use chips instead of tubes and in all of that they don't require as much light. We can due projects, make recordings with much less light intensity that doesn't mean that we don't still need the good, attractive angles, the good positions, there can be smaller lights, we still have to have lights. One of the trade-offs though is that the smaller the source of light, the sharper the angle. The sharper the edge of the shadow, for example. So, that traditionally the good light has had a big lens, so you would have a soft edge on that, the good dispersion of light and when you get a pin point light source that it becomes very hard, maybe unattractive. So, that's one of the contradictions that we have. We don't require as much light, we can use smaller, lower voltage instruments, the trade-off on that is that the light itself is as attractive, so what do you do...In our studio, which is a very user friendly studio, we continue to use large lens instruments to have a better look. But on remote shoots where
you go out into the field and you have to carry everything or loaded up on the truck, quite often well we’ve gone to smaller instruments.

Q: And, for example, can you store four, five different lighting set ups in computer, so you don’t even have to look for what you should do.

A: Yes, in fact that’s the way we operate. We can store, but I don’t know how many, certainly more than we need, but for example, in our smaller production studio, we have four permanent sets in there and one corner, which is dedicated to shooting small items or flat art work, pictures, what have you. And, each of these set ups is stored in the memory of the computer. In our larger studio, which is we use for special or occasional productions, larger pieces of work, we can for example, we do have production sets in two of the corners that we strike, tear out when we do some of our larger productions. And then, we bring the set back in and we have that lighting set up stored in memory, so I don’t have to recreate that, so that’s very handy and that’s part of our routine and it’s almost necessary when you do a variety of productions with limited personnel. One or two people doing all the work, then if you have to create it from square one or ground zero every time you do something that’s just a lot more work. So, anything that you can do to keep the information necessary to do a recurring production, the less work you have to do, we like that.

Q: And, the last thing as an advice to students or taking lighting courses or trying to specialize in lighting; I was told and I heard that we should keep simple, because every
light we add is another shadow, another complex situation, so what do you think? What is your advice?

A: That is good advice. Also, it's not as much work. The...what's important in keeping it simple is to do preliminary study in thinking, don't go into the studio with a setting place and then try to create something in a couple of hours. Work with a set designer, figure out what your angles are gonna be, what the positions, the talent positions are gonna be, work with the director, so that you will know what the director is wanting or will want and then after you do all of your pre-production, research and planning, draw that along the paper. It will be much easier if you sit down, try to figure out what you're doing before you going to studio, that doesn't mean that you can't change your mind, you can always change your mind, you know do something different. But, you'll make it much easier on yourself if you sit down, draw the scheme, take whatever it takes, half hour, one hour, two hours and then take that plot to the studio and work from there, it may be the...when you get into the studio you'll see that maybe you haven't figured the distances exactly that maybe your angles were different, maybe the set is not designed the way you thought it was gonna be. You might have to change, but at least you've got a plan, a skeleton of an idea that you can refer to and it'll make it much easier to fit in any changes and to that plan rather than just making something up as go along. Yes, keep it simple.

Q: Thank you very much for your information. And, thank you again.
Hello, my name is John Modaff, and in this program, we will look at four different studio lighting styles in video production. But first, I'll try to explain light, lighting, and major lighting sources and equipment in the studio.

Light is part of our everyday world. When we look around us, we simply use light. Light helps us to see, examine, and understand the things around us. It has strong effects on our feelings and emotions. Perhaps, light is the main ingredient for visibility.

The eye responds to light. Every object viewed is seen with light...either the light emitted by the object or light that is
reflected from it. The sun is the only natural light source and it’s a very hard light source. In our day to day activities, we need light to do our jobs whether we are accountants, mechanics, students, or television producers. At the same time, we need light to entertain ourselves as when reading a book or going on a picnic. We most often treat light as an accepted part of our lives and never give it much thought until we don’t have enough or have too much for what we want to do. At the same time, there would be no video without light. We use the sun as a main light source in our daily outdoor activities or work. But, when we are indoor or in the studio, things really change. We start to use artificial light; especially indoors, we need artificial light for video production.
Light in the studio is a principle design tool for the videographer. It is essential for the video...According to scientists, light is a part of the electromagnetic spectrum that normally stimulates sight; but for the visual artists, which is the focus of this program, we would define it in emotional terms...terms like hard, warm, romantic, soft, or cool. At the same time, color is closely associated with light; our perception of color changes as the light changes. Color exists in light. Actually, we do not live in a world of colored objects: color means only that the surfaces of those objects reflect back a particular portion of the light that is hitting them. Thus, a banana is yellow because it reflects yellow light, not because the fruit itself is yellow.

Especially in the studio, we must be careful about light...lighting. The
to the cameras

MS: Turn on and off the light hitting the talent, changing the color of the light on the talent

LS: Lowering the intensity of the light hitting the talent sitting in the chair

WS: Switching light source to another using dimmer

LS: Light with red color gel hitting the talent

CU: Different light bulbs, gels, light sources

camera can not automatically adjust itself for the light as our eyes do. So, when we are in the studio, we must always think about light, not only if there is enough but what the source is, the direction it is coming from, and even what color it is. And, we must think about how the total lighting pattern will affect the images we are recording. The lighting director or the videographer can manipulate light to increase the drama of ordinary things...or to illuminate chosen objects while obscuring others. The lighting director can use light to affect the color relationships of objects in his or her picture; and this changes our perception of the colors and our emotional response to them. We must remember that the mood of the picture is due in part to the quality of light in the picture. Quality of light is basically determined by the character and size of
the light source, its intensity, direction, and color.

Primarily in the studio, the source of light is important, because different sources will make pictures appear differently. Artificial studio light is different from daylight. In this case, our primary objective of artificial lighting is simple: control the direction and the quality of the light that falls on our object. For example, if the pictures are recorded with incandescent light, they will be different from those recorded with fluorescent tubes. And, all light sources produce different kinds of light, which in turn will produce different kinds of pictures. Again, the most important thing we have to remember is artificial lighting in the studio is a completely controlled environment and it is shaped by the limits of our capabilities. Direction of light, form,
light areas, contrasts. contrast, and color... they all determine studio lighting styles. We have to be able to use them in harmony.

Caption: Lighting sources and Equipment

CU: Spot light

CU: Another spot light

Basiclly, there are only two types of lighting sources in the studio. The first is spot, which is a specular light source.

LS: Pan left from light to the talent (show the light quality)

Spot lights are primarily designed to throw a directional, defined beam that illuminates a specific area. They cause dense, harsh shadows.

MS: Shadows of spot light

The most common studio lights are the fresnel spotlight and ellipsoidal spot light. There are also a variety of portable spotlights, which differ greatly in size and beam spread. Most studio lights have glass lenses that help to collect the light rays and focus them into a distinct beam. The spread of the beam can be adjusted from a spot of focus position to a flood position by moving
the light source

CU: Shot or picture of an ellipsoidal spot

MLS: Pan left and tilt down following light coming from the light source

MS: Person playing with the lens of the light.

WS: Shot of Ginger Studio’s lighting

CU: Pan left or right to fresnel lights

WS: Shot of KET lighting

CU: Pan left or right to spot lights

The second lighting source is flood, which is generally considered a diffuse light source. Flood light is a broad, generally soft light. It produces a great

the lamp reflector assembly toward or away from the lenses. Ellipsoidal spot lights are used for special effects. They produce extremely sharp, high intense beams that can be given rectangular or triangular shapes by movable metal shutters. We can focus the ellipsoidal spot light by moving the lens away from or closer to the fixed bulb-reflector assembly. In Morehead State U.’s Ginger Hall Studios, we are able to use fresnel spot lights, but the number is limited to thirteen. Thirteen spot lights may not be enough for large area shows, but one will see a lot more spot lights in KET studios in Lexington. The reason is, we have to be ready for complex, big scale productions.
amount of non-directional, diffused light that causes very soft shadows. The purpose of this light is to soften and thereby control the shadows that are created by the angle of the focused spot light. Flood lights don’t have lenses, because their purpose is not to create a sharp beam.

The more common studio floods are the broad, the softlight, and the scoop. The broad produces a great amount of highly diffused light. We use the broad to illuminate large areas. News sets and interview areas are often lighted by a series of broads. Softlights are similar to broads, except that the large opening is covered with a diffusing material that scatters the light so much that it renders the shadows virtually invisible.

Softlight is often used where flat lighting is important, such as product displays in commercials, instructional
LS: Tilt down, light coming from scoop, hitting the talent

ECU: Showing inside of the scoop

WS: Showing the spot and scoop working together

CU: Shot or picture of fluorescent light

Additional to these soft light sources, we can use fluorescent light or cyc light.

Fluorescent tubes today are highly efficient and produce extremely diffused light. Cyc light is used to illuminate cycloramas and large areas of scenery.

CU: Shot or picture of cyc light

WS: Pan right, use of cyc light in studio

They are usually positioned side by side on the studio floor and shine up onto the background. In Morehead State U.'s Ginger Hall Studio, we have only fifteen soft light sources and this number is not enough for the average size television studios. In KET studios, one would be able to use a large variety of soft light sources.

MLS: Shots of soft-flood lights, pan left and rights

MLS: Shots of soft-flood lights with pan left and rights, in KET
Additional to two main lighting sources, we use other lighting materials to control studio lighting. We must remember that the real art of lighting is in the control of lighting sources. Barn doors, scrims, and some other lighting equipment are used to control lighting. Barn doors offer a method of restricting the beam size from luminaries. They are normally fitted to spotlights. Barn doors consist of a frame of four metal flaps. Tilting the flaps up or down will restrict the light beam. To diffuse the light beam more, we can attach a scrim or a diffuser to the front of the scoop light. A scrim is a heat-resistant spun-glass material. We also use flags for blocking the light on specific areas of the performer or set. With their stands and extension arms, they provide an important final control over illumination. Reflectors help us to maintain the natural look. They are
LS: Person bouncing the light
directionless and shadowless. With the
use of a reflector, we can bounce the
light into the selected area. Color filters
can also be helpful for us to change the
mood in the scene and the color of the
light.

MLS: Person putting color gel on light
(pan left to see the light)

ECU: Shot or picture of a lightmeter
Besides working with the lighting
sources and equipment, we must use a
lightmeter to measure incident and
reflected light. A lightmeter is a tool
that allows us to accurately measure the
intensity of light. The intensity of
television lighting is measured in two
different ways. We can find out how
much incident light is falling upon a
subject by holding the meter very near to
the camera subject and pointing it
directly toward the light source. The
second method of measuring intensity is
achieved by the reflected light reading.
It indicates how much light is reflected
from the surface areas of subjects into

WS: Man with lightmeter working on
incident light reading

WS: Man with lightmeter working on
reflected light reading
Color temperature is another important part in television lighting. All light sources have a certain color quality, which may also be called color temperature. The various types of artificial light do not contain all colors. In general, they contain less blue and more red light than daylight. We use the Kelvin scale to measure it. Sunlight is approximately 5600 Kelvin degrees and studio light is only 3200 Kelvin degrees. One must also white balance the television camera to adjust to color differences in the television studio. The reason we need to white balance the camera in the studio is that all light sources do not produce light of the same whiteness.
The style of lighting design must grow out of the style of the production. The lighting director lights not just objects, but an event, a performance or a show. It is not sufficient for the lighting to provide visibility, modeling, coloring and focus; it must also make a stylistic statement consistent with the entire production. Television lighting in the studio does have styles, just as surely as any other aspect of the production; and lighting styles can be influenced by a number of different factors: genre, purpose of the director, conventional systems of lighting, and the style of other aspects of the production. It is common to prescribe different lighting styles depending on whether the production is dance, drama, talk show or news.

Each different production depends on a different lighting style. At the same
CU: Shot or picture of three point lighting
MLS: Shot of spot light from talent’s position and pan left to fill light and full turn to back light
time, each lighting style depends on basic fundamental television lighting, which we call three-point lighting. As we know, we basically use key, fill and back light in three point lighting. Key and back light are hard; fill light is soft.

We basically use different variations of these lights in different lighting styles.

Now, we can look at four different studio lighting styles in video productions.

Caption: Silhouette Lighting

WS: Example shot from TV
Silhouette lighting relies entirely upon subject outline, completely obliterating the color, tone, texture, and surface modeling of the subject. We meet silhouettes in decorative applications and dramatic effects. The lighting director controls two different areas in the studio...brightly illuminated background and the darkened foreground. The foreground is again recognized only by
its outline, details of which act to enrich the picture. Hard back light plays the most important role in foreground-background contrast. The lighting director angles the back light lower and closer to the subject. Barn doors have a specific role in silhouette lighting. We must be very careful about the direction of the light in silhouette lighting. Barn doors help us direct the light only to the back side of the subject. If we don’t control the light direction, we can’t have real silhouette lighting. We lose the dramatic effect. Especially in commercial television, silhouette lighting is used for interviews, confessions, and some one person performance shows. The purpose is to establish the mood for emotional involvement.

Caption: Cameo Lighting
The second lighting style we will look at is cameo lighting. Cameo lighting is simply the opposite of silhouette lighting. It is a way of achieving the focus of attention on the object. A good cameo light requires a complete lack of any light hitting the background. Front lighting must be carefully controlled to make certain that no spill is reflected onto the set behind the talent. Cameo lighting also requires the slight lowering of the fill light on the subject, so as to emphasize the directional quality of the lighting. We, as lighting directors, basically depend on fill light. As in silhouette lighting, we control foreground-background contrast. We use diffusers on soft light sources. A lighting director may also prefer to use hard light from the same angle of fill light, but he or she must soften the light with diffusers and barn doors. Barn doors help us to direct softened hard
CU: Another example from CNN Presents

Caption: Rembrandt Lighting

CU: Examples of paintings Rembrandt lighting originally came from Rembrandt’s paintings. It emphasized dramatic effects. Rembrandt lighting is an art of shadowing. We try to create the variation in light and shade. Smooth transitions between light and shade areas are the primary point in Rembrandt lighting. Rembrandt lighting is generally used to illuminate the most important person in the dramatic scene.

WS: Examples from TV soaps

CU: Face of the person in soap opera We try to emphasize this person with a soft-side light using fill light just from the left or right side of the person. Low intensity colors like muddy browns and dark reds in Rembrandt lighting help us to strengthen the point of emphasis.

Because of the intended shadows and
WS: Pan right from talent’s left to right, showing the shadows

WS: Example from TV soap

dark areas, using one fill light from the left or right side of the person would be enough. We can use Rembrandt lighting in highly emotional productions. It helps us to give the feeling of heaviness, tragedy, and mystery.

Caption: Notan Lighting

CU: Shots or pictures of notan art

In commercial television, notan lighting is usually known as flat lighting. It is basically shadowless lighting. Notan lighting is a part of Japanese Sumi-e art. Sumi-e art is made on white paper as pure and clean as fresh-fallen snow.

CU: Pan right on notan art examples

Notan lighting is the even distribution of illumination on a set, or on a paper for the purpose of avoiding highlights and shadows. We basically talk about the interaction between positive and negative space in notan lighting:

WS: Example from TV talk show

Positive space is an even distribution of
illumination on a set and the negative space is the object on that set. In television productions, with television’s multiple-camera formats and continuous action productions, lighting directors have found it difficult to adhere to the concept of classic three-point lighting.

For example, in the talk show format, the host or hostess moves to people in the audience and the cameras must shoot from many angles. The solution to this situation is to create an overall wash of illumination throughout the entire set.

Many soft lights are used from all possible camera angles. We can use a circle of soft lights from the top of the set. The result is what generally is called flat lighting, because the faces take on more of a flat look as differentiated from the shaped effect of shadows created by the Rembrandt lighting.
In Notan lighting, shadows are eliminated as much as possible with the help of soft lights built over the set. Its emphasis is upon presenting a flat, two-dimensional effect in which pattern, surface detail and color predominate. Notan lighting is mostly used for fashion shows, talk shows, newscasts, sitcoms, and large area show programs.

As a result, we can say that making a television show is more than just rolling a tape in the camera. It is a creative art. What it looks like, what it says, and even the viewer’s reaction are all up to us.

At the same time, good, effective style lighting is absolutely essential to any show. The best approach to style lighting is to ‘keep it simple.’ And, I wish you good luck in your studies.